

ORIGINAL



0000016031

**BEFORE THE POWER PLANT AND
TRANSMISSION LINE SITING COMMITTEE**

307

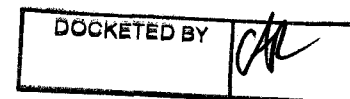
IN THE MATTER OF THE APPLICATION OF
SALT RIVER PROJECT AGRICULTURAL
IMPROVEMENT AND POWER DISTRICT ON
BEHALF OF ITSELF AND ARIZONA PUBLIC
SERVICE COMPANY, SANTA CRUZ WATER
AND POWER DISTRICTS ASSOCIATION,
SOUTHWEST TRANSMISSION COOPERATIVE,
INC. AND TUCSON ELECTRIC POWER IN
CONFORMANCE WITH THE REQUIREMENTS
OF ARIZONA REVISED STATUTES SECTION 40-
360, et. seq., FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY
AUTHORIZING CONSTRUCTION OF THE PINAL
WEST TO SOUTHEAST VALLEY/BROWNING
PROJECT INCLUDING THE CONSTRUCTION OF
TRANSMISSION LINES FROM PINAL WEST TO
THE BROWNING SUBSTATION AND OTHER
INTERCONNECTION COMPONENTS IN PINAL
AND MARICOPA COUNTIES, ARIZONA.

CASE NO. 126
DOCKET NO. L-00000B-04-0126

NOTICE OF FILING

Arizona Corporation Commission
DOCKETED

DEC 02 2004



NOTICE IS HEREBY GIVEN that Staff of the Arizona Corporation Commission is
filing a copy of the power point presentation presented as part of Jerry Smith's initial testimony.
A copy of this presentation has been attached.

RESPECTFULLY SUBMITTED this 2nd day of December, 2004.

Lisa Vandenberg, Attorney
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
Telephone: (602) 542-3402
Facsimile: (602) 542-4870

Pursuant to R14-3-204 the ORIGINAL
and twenty-five (25) copies were
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Docket Control
Arizona Corporation Commission
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Phoenix, Arizona 85007

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this 2nd day of December, 2004, to:

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AZ CORP COMMISSION
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RECEIVED

1 Kenneth C. Sundlof, Jr., Esq.
JENNINGS STROUSS & SALMON, PLC
2 201 E. Washington Street
11th Floor
3 Phoenix, Arizona 85004-2385
Attorney for Applicant
4
5 Kelly J. Barr, Esq.
Salt River Project
Law Department
6 PAB 221
Post Office Box 52025
7 Phoenix, Arizona 85072-0221
8
9 Laura Raffaelli, Esq.
Legal Services Department
Mail Station PAB 207
Post Office Box 52025
10 Phoenix, Arizona 85072-2025
11
12 Walter Meek
Arizona Utility Investors Association
2100 N. Central Avenue, Suite 210
Post Office Box 34805
13 Phoenix, Arizona 85067
14
15 Alicia M. Corbett, Esq.
John R. Dacey, Esq.
Gammage & Burnham
One Renaissance Square, 18th Floor
16 Two North Central Avenue
Phoenix, Arizona 85004
17
18 Ursula H. Goodwin, Esq.
K. Scott McCoy, Esq.
City of Casa Grande
19 510 East Florence Boulevard
Casa Grande, Arizona 85222
20
21 Roger K. Ferland, Esq.
Michelle De Blasi, Esq.
Quarles Brady Streich Lang, LLP
22 One Renaissance Square
Two North Central Avenue
23 Phoenix, Arizona 85004-2391
24
25 Leonard M. Bell, Esq.
Martin & Bell, LLC
365 East Coronado
Suite 200
26 Phoenix, Arizona 85004
27
28 ...

1 Lawrence V. Robertson, Jr., Esq.
2 Munger, Chadwick, PLC
3 National Bank Plaza
4 Suite 300
5 333 North Wilmot
6 Tucson, Arizona 85711

7 Jordan Rich Rose, Esq.
8 Court S. Rich, Esq.
9 Kay Bigelow, Esq.
10 Jorden Bischoff McGuire Rose & Hiser, PLC
11 7272 East Indian School Road
12 Suite 205
13 Scottsdale, Arizona 85251-0001

14 Karrin Kunasek Taylor, Esq.
15 William Edward Lally, Esq.
16 Biskind Hunt & Taylor, PLC
17 11201 N. Tatum Blvd., Suite 330
18 Phoenix, Arizona 85028

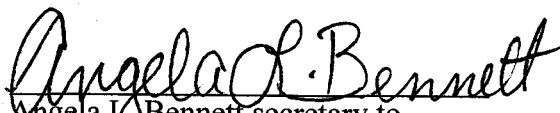
19 James E. Mannato, Esq.
20 Florence Town Attorney
21 775 North Main Street
22 P.O. Box 2670
23 Florence, Arizona 85232

24 James J. Heiler, Esq.
25 APCO Worldwide
26 5800 Kiva Lane
27 Scottsdale, Arizona 85253

28 Andrew E. Moore, Esq.
Lynne A. Lagarde, Esq.
Earl, Curley & LaGarde
3101 North Central Avenue
Suite 1000
Phoenix, Arizona 85012-2654

**COPY of the foregoing mailed
this 2nd day of December, 2004, to:**

George J. Chasse
Casa Grande Mountain Limited Partnership
5740 East Via Los Ranchos
Paradise Valley, Arizona 85253



Angela L. Bennett secretary to
Lisa A. VandenBerg



**Arizona
Corporation
Commission**

Docket No. L-00000B-04-0126

**Pinal West to SEV/Browning
500 kV Line Siting**

**Presentation of Staff Witness
Jerry D. Smith**

November 30, 2004



ACC Staff Witness

Name: Jerry D. Smith

Title: Electric Utility Engineer

Employer: Arizona Corporation Commission

**Address: Utilities Division
1200 W. Washington
Phoenix, AZ 85007**

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Professional Background

- **B.S.E.E. - University of New Mexico**
- **M.S.E.E. - New Mexico State University**
- **Registered Arizona P.E. - Electrical**
- **27 Yrs. Engineering and Management Experience with the Salt River Project**
- **Utility Regulatory Experience Since 2/99**

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Purpose of Testimony

- **Establish Hearing Record for Commission Consideration of its Balancing Test**
- **Contrast Project with Current 10 Year Plan and 2004 Biennial Transmission Assessment**
- **Staff Technical Assessment of Project**
 - Justification of Need
 - Reliability of Common Corridor or Consolidated Facilities

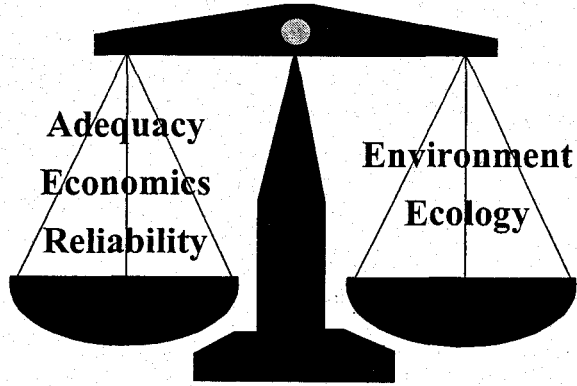
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A.R.S. §40-360-07.B ACC Balance Test




Public Interest

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Adequacy and Reliability

Reliability is comprised of two components:

“Adequacy - The ability of the electric systems to supply the aggregate electrical demand and energy requirements of their customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.”

“Security - The ability of the electric systems to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements.”

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Additional Staff Proposed Measures of Reliability

- **There should be sufficient transmission import capacity to reliably serve all loads in a utility's service area without limiting access to more economical or less polluting remote generation**
- **New power plants must have sufficient interconnected transmission capacity to reliably deliver its full output without use of remedial action schemes or displacing apriori generation at the same interconnection for single contingency (N-1) outages**

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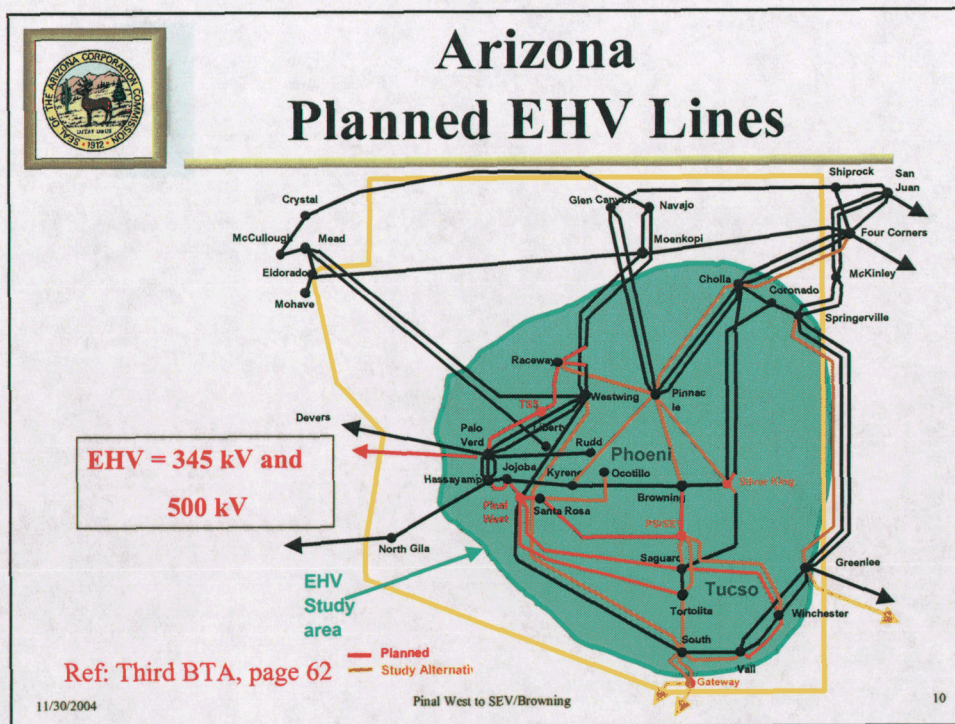
BTA vs. 10 Year Plan

- **Biennial Transmission Assessment (BTA):**
 - Occurs on Even Numbered Years
 - Covers a Ten Year Period
 - Utilizes Most Recent Ten Year Plans
- **Third BTA Filed for Approval Nov. 30, 2004**
- **Ten Year Transmission Plans Filed Annually with Commission by January 31**
 - Most Recent Plans Filed January 2004
 - Covers 2004 thru 2013

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Ten Year Plan Filings By Project Participants

Per A.R.S. §40-360.02.A Statutory Requirement:

| Project Participant | Jan. 31, 2003 | Jan. 31, 2004 |
|--------------------------|---------------|------------------|
| SRP | Yes | Yes |
| APS | Yes | Yes |
| ED-2 | No | No |
| Santa Cruz Water & Power | No | Yes |
| SWTC | Yes | Yes |
| TEP | Yes | Yes ¹ |

¹ Notice of Errata correcting date of facility dated February 12, 2004.

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2004 Ten Year Plan Filings By Project Elements

Per A.R.S. §40-360.02.A Statutory Requirement:

| Project Element | Service Date ¹ | 2004 |
|-------------------------------------|---------------------------|------|
| Palo Verde - Pinal West 500 kV | 2006 | Yes |
| Pinal West – Santa Rosa 500 k V | 2007 | Yes |
| Santa Rosa – Pinal South/SEV 500 kV | 2011 | Yes |
| Santa Rosa – Pinal South/SEV 230 kV | ? | No |
| SEV-Browning 500 kV | 2011 | Yes |
| SEV-RS19-Browning 230 KV | TBD/2008 | Yes |

¹ Per CEC applications.

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3rd Biennial Transmission Assessment - Key Conclusions

- Existing and Planned Transmission Facilities Meet Load Serving Requirements of Arizona in a Reliable Manner. (Without the Planned Facilities A Different Conclusion May Have Been Reached)
- The Palo Verde to TS5 to Raceway and Palo Verde to Browning Projects Will Significantly Increase the Outlet Capability of the Palo Verde Hub to Arizona.
- Existing Transmission from Palo Verde to California is Inadequate to Allow All New Palo Verde Hub Generation Full Access to the California Market Under Weak Arizona Market Conditions.

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Benefits of Proposed Project

- **New Line Capacity Meeting Local Consumer Needs:**
 - Metropolitan Phoenix Area (APS and SRP)
 - Pinal County (APS, SRP, Santa Cruz Water & Power Districts Association)
 - Cochise and Pima County (SWTC, TEP)
- **Wholesale Market Opportunities**
 - Improves Merchant Power Plants' Access to Multiple Markets
- **Helps Mitigate Existing Palo Verde Hub Reliability Risks and Local RMR Constraints**

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Staff Assessment (1 of 2)

- **Staff Believes the Proposed Facilities are Needed and Applicant Has Met The Need Justification Burden for**
 - 500 kV Line From Pinal West to Browning
 - 230 kV Line From SEV – RS19 – Browning
- **Do Not Support Approval of a 230 kV Line From Santa Rosa to SEV via this Project for the Following Reasons:**
 - No Specific 230 kV Line Has Been Identified
 - Fails to Comply with A.R.S. §40-360.02.A Since No Ten-Year Plan Has Been Submitted for Such a Line
 - Fails to Comply with A.R.S. §40-360.02.C.7 Since No Technical Studies Have Been Submitted for Such Line

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Staff Assessment (2 of 2)

- **Support Provision for Future 500 kV Interconnection With the Pinal West to Browning 500 kV Line at:**
 - Santa Rosa Substation (Exhibit G-10)
 - Pinal South Substation (Exhibit G-11)
 - South East Valley Substation (Exhibit G-12)
- **Support Use of Vertical 500 kV Poles (per Exhibit G-1) From Santa Rosa to SEV as Needed to Accommodate Consolidation of Future Lines (per Exhibit G-2) Not Yet Planned, Studied or Sited Provided Such Future Lines Do Not Pose Unreasonable System Reliability Risk**
- **Staff Supports the Proposed Route Given There Are No Compelling Arguments an Alternative is Superior.**

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Consolidated Facilities and Common Corridors (1 of 2)

- **Staff Supports Consolidation of Facilities For Environmental and Aesthetic Purposes if System Reliability is Not Compromised**
- **Staff Also Supports Use of Common Corridors if System Reliability is Not Compromised**
- **Consolidation of Proposed Facilities or Use of Common Corridors w/o Consideration of Technical Consequences Is Inappropriate Planning**

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Consolidated Facilities and Common Corridors (2 of 2)

- **Reliability Impacts of Consolidating Facilities or Using A Common Corridor are Generally Lessened When:**
 - Lines Are of a Different Voltage Class (ie. 230 kV vs. 500 kV)
 - Lines Do Not Share a Common Terminus
 - Lines Connect to Segregated Service Areas or Geographical Areas (ie. TEP's Tucson Service Area and SRP's Phoenix Service Area)

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Questions ?



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